DHS Science and Technology Directorate
Mobile Biometrics

Why it's Needed

Of the 584 officers killed in the line of duty between 2000 and 2009, 82 percent of the people responsible for their deaths had prior criminal records or a current warrant out for their arrest (Federal Bureau of Investigation Criminal Justice Information Services Division). During day-to-day operations, first responders are presented with potentially dangerous situations in which they encounter individuals with no identification. In some cases, they are forced to decide whether to take a person's word for who they are or take the individual into custody to ascertain their true identity. Mobile biometric devices, such as iris, face, and fingerprint readers, assist responders in obtaining accurate identifications in the field in near real-time—if a person has a past criminal record or an active warrant.

What it Does

In 2008, the Department of Homeland Security (DHS) Science and Technology (S&T) Directorate

brought together local, tribal, state, and Federal first responders, along with the Department of Defense, Department of Justice, and the intelligence community, to determine critical upgrades needed in mobile biometric devices.

Through this partnership, it was determined that a ten-fingerprint capture capability in the field was a top priority; at the time, only a single fingerprint capability existed. Ten-print collection capabilities in a mobile device have the ability to add a much higher level of accuracy to database search results—ultimately increasing accuracy, decreasing processing time, and ultimately saving officers' lives. Additional partners included the United States Coast Guard, United States Secret Service, Immigrations and Customs Enforcement, Customs and Border Protection, and the United States Visitor and Immigrant Status Indicator Technology program.

The Value

Today, dual fingerprint systems are available, yet the process of capturing all ten fingerprints is inefficient and time consuming. S&T is working to mature a finger-slap module that will allow for rapid, efficient, ten-fingerprint capture in a mobile device. The current ten-print capture systems are too bulky and heavy for mobile devices due to the size and weight characteristics of its core technology. New products under development will not use these core technologies or off-the-shelf solutions, but instead will use challenging new technologies.

Next Steps

S&T will fully develop a mobile device that integrates the ten-fingerprint module (four-finger slap module currently under development) along with additional biometric modules to include face, iris, and card readers. The end product will adhere to the National Institute of Standards and Technology Mobile ID Best Practice Recommendations and all applicable standards. S&T is currently conducting operational pilot projects with local, state, and Federal first responders in Georgia, Texas, Washington, California, and Colorado using state-of-the-art mobile biometric devices. These pilots will provide operational feedback on mobile devices that will be used to formulate the next generation of mobile devices. S&T will also produce a testing process and qualified product list for the smart acquisition of mobile biometric devices.

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